

STN:Search History Report

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(FILE 'HOME' ENTERED AT 16:19:20 ON 26 JAN 2009)

FILE 'MEDLINE, SCISEARCH, CAPLUS, BIOSIS' ENTERED AT 16:19:34 ON 26 JAN 2009

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L1      3278 S TRANSGEN? (L) CHICKEN
L2      355991 S RETROVIR? OR ALV OR MULV
L3      38319 S OVIDUCT?
L4      14 S L1 (L) L2 (L) L3
L5      10 DUP REM L4 (4 DUPLICATES REMOVED)
L6      10 SORT L5 PY
          E IVARIE (L) ROBERT/AU
          E HARVEY (L) ALEX/AU
          E HARVEY ALEX/AU
L7      54 S E5
          E IVARIE ROBERT/AU
L8      59 S E3
L9      32 S E4
L10     126 S L7 OR L8 OR L9
L11     37 S L10 AND L1
L12     31 DUP REM L11 (6 DUPLICATES REMOVED)
L13     13 S L12 AND L2
L14     13 FOCUS L13 1-

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=> d ti so au ab l14 6 8 9

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L14     ANSWER 6 OF 13      MEDLINE on STN
TI      Expression of exogenous protein in the egg white of transgenic
        chickens.
SO      Nature biotechnology, (2002 Apr) Vol. 20, No. 4, pp. 396-9.
        Journal code: 9604648. ISSN: 1087-0156.
AU      Harvey Alex J; Speksnijder Gordon; Baugh Larry R; Morris Julie
        A; Ivarie Robert
AB      Using a replication-deficient retroviral vector based on the
        avian leukosis virus (ALV), we inserted into the chicken
        genome a transgene encoding a secreted protein, beta-lactamase,
        under the control of the ubiquitous cytomegalovirus (CMV) promoter.
        Biologically active beta-lactamase was secreted into the serum and egg
        white of four generations of transgenic chickens. The
        expression levels were similar in successive generations, and expression
        levels in the magnum of the oviduct were constant over at least 16 months
        in transgenic hens, indicating that the transgene was
        stable and not subject to silencing. These results support the potential
        of the hen as a bioreactor for the production of commercially valuable,
        biologically active proteins in egg white.

L14     ANSWER 8 OF 13      MEDLINE on STN
TI      Biologically active human interferon alpha-2b produced in the egg white of
        transgenic hens.
SO      Transgenic research, (2003 Oct) Vol. 12, No. 5, pp. 569-75.
        Journal code: 9209120. ISSN: 0962-8819.
AU      Rapp Jeffrey C; Harvey Alex J; Speksnijder Gordon L; Hu Wei;
        Ivarie Robert
AB      We have previously described the expression of a bacterial protein in the

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egg white of transgenic chickens using a replication-deficient retroviral vector. Here we report the expression of a glycosylated human protein, interferon alpha-2b (hIFN), in the egg white of transgenic hens. The hIFN secreted into the egg white was biologically active as determined by a viral inhibition assay. Purification and carbohydrate analysis of the hIFN expressed in egg white revealed that two of the six major glycosylated hIFN species match the naturally occurring human hIFN glycovariants. These results support the potential of the hen as a bioreactor for the production of commercially valuable, biologically active, and glycosylated proteins in egg white.

L14 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN

TI Avian transgenesis: progress towards the promise

SO Trends in Biotechnology (2002), Volume Date 2003, 21(1), 14-19

CODEN: TRBIDM; ISSN: 0167-7799

AU Ivarie, Robert

AB A review. The hen has long held promise as a low cost, high-yield bioreactor for the production of human biopharmaceuticals in egg whites. A typical egg white contains 3.5-4.0 g of protein, more than half of which comes from a single gene (ovalbumin). Harnessing the power of the gene to express a recombinant protein could yield up to a gram or more of the protein in the naturally sterile egg. Accordingly, a major effort has been underway for more than a decade to develop robust methods for modification of the chicken genome. This effort intensified in the mid-1990s when several avian transgenic companies entered the scene. Progress has been made in that time but much remains to be done.